

CLAIMS

What is claimed is:

1. A method for redirecting network device configuration data, comprising
5 the steps of:
 - establishing a first TCP connection from a management station to an HTTP server on a first network device;
 - establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device;
 - 10 sending an HTTP request containing network device configuration data to the first network device through said first TCP connection;
 - reading said data in said HTTP request from said first TCP connection;
 - writing the data in said HTTP request to said forwarding TCP connection;
 - and
 - 15 determining whether the entire HTTP request has been received by comparing said data in said HTTP request to a predetermined data pattern as said data in said HTTP request is written to said forwarding TCP connection.
2. The method according to claim 1, wherein said first network device is a
20 LAN switch.
3. The method according to claim 2, wherein said second network device is a LAN switch.

4. The method according to claim 1, wherein said predetermined data pattern is a four byte octet sequence consisting of CR-LF-CR-LF.

5. The method according to claim 4, wherein said first network device is a
5 LAN switch.

6. The method according to claim 5, wherein said second network device is a
LAN switch.

10 7. A method for redirecting network device configuration data, comprising the steps of:

establishing a first TCP connection from a management station to an HTTP server on a first network device;

establishing a forwarding TCP connection from the HTTP server on said
15 first network device to an HTTP server on a second network device;

sending an HTTP request containing network device configuration data to the first network device through said first TCP connection;

reading said data in said HTTP request from said first TCP connection;

writing the data in said HTTP request to said forwarding TCP connection;

20 and

determining whether the entire HTTP request has been received by parsing the header of said HTTP request to extract a field containing the length of the HTTP request and using said extracted field to determine the length of said HTTP request.

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8. The method according to claim 7, wherein said first network device is a LAN switch.

9. The method according to claim 8, wherein said second network device is a
5 LAN switch.

10. The method according to claim 7, wherein said field is the content length field.

10 11. The method according to claim 10, wherein said first network device is a LAN switch.

12. The method according to claim 11, wherein said second network device is a LAN switch.

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13. A cluster of network devices, comprising:
a cluster management station capable of transmitting HTTP requests and;
a commander network device capable of receiving said transmitted HTTP requests and redirecting them to one or more expansion network devices.

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14. The cluster of network devices according to claim 13, wherein said commander network device is a LAN switch.

15. The cluster of network devices according to claim 14, wherein said
25 expansion network devices are LAN switches.

16. The cluster of network devices according to claim 13, wherein said commander network device has a non-private IP address and said expansion devices have private IP addresses.

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17. The cluster of network devices according to claim 13, wherein said network devices in the cluster transmit data to other network devices to discover whether additional network devices may be added to the cluster.

10 18. The cluster of network devices according to claim 15, wherein said network devices in the cluster transmit data to other network devices to discover whether additional network devices may be added to the cluster.

19. The cluster of network devices according to claim 16, wherein said
15 network devices in the cluster transmit data to other network devices to discover whether additional network devices may be added to the cluster.

20. A cluster of network devices, comprising:
a cluster management station having means for establishing a first TCP
20 connection from said cluster management station to an HTTP server on a first network device and means for sending an HTTP request containing network device configuration data to the first network device through said first TCP connection; and
a first network device having means for establishing a forwarding TCP
25 connection from the HTTP server on said first network device to an HTTP server

on a second network device, means for reading said data in said HTTP request from said first TCP connection, means for writing the data in said HTTP request to said forwarding TCP connection, and means for determining whether the entire HTTP request has been received by comparing said data in said HTTP request to a predetermined data pattern as said data in said HTTP request is written to said forwarding TCP connection.

21. The cluster of network devices according to claim 20, wherein said first network device is a LAN switch.

22. The cluster of network devices according to claim 20, wherein said second network device is a LAN switch.

23. The cluster of network devices according to claim 20, wherein said predetermined data pattern is a four byte octet sequence consisting of CR-LF-CR-LF.

24. A first network device capable of receiving HTTP requests and redirecting them to a second network device, comprising:

means for receiving data contained in a HTTP request from a first TCP connection;

means for establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device;

means for writing the data in said HTTP request to a forwarding TCP connection and

means for determining whether the entire HTTP request has been received by comparing said data in said HTTP request to a predetermined data pattern as said data in said HTTP request is written to said forwarding TCP connection.

5 25. The apparatus according to claim 24, wherein said first network device is a LAN switch.

26. The apparatus according to claim 24, wherein said second network device is a LAN switch.

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27. The apparatus according to claim 24, wherein said predetermined data pattern is a four byte octet sequence consisting of CR-LF-CR-LF.

28. A cluster of network devices, comprising:

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a cluster management station having means for establishing a first TCP connection from said cluster management station to an HTTP server on a first network device and means for sending an HTTP request containing network device configuration data to the first network device through said first TCP connection; and

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a first network device having means for establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device, means for reading said data in said HTTP request from said first TCP connection, means for writing the data in said HTTP request to said forwarding TCP connection, and means for determining whether the entire

25 HTTP request has been received by parsing the header of said HTTP request to

extract a field containing the length of the HTTP request and using said extracted field to determine the length of said HTTP request.

29. The cluster of network devices according to claim 28, wherein said first
5 network device is a LAN switch.

30. The cluster of network devices according to claim 28, wherein said second network device is a LAN switch.

10 31. A first network device capable of receiving HTTP requests and redirecting them to a second network device, comprising:

means for receiving data contained in a HTTP request from a first TCP connection;

means for establishing a forwarding TCP connection from the HTTP server
15 on said first network device to an HTTP server on a second network device;

means for writing the data in said HTTP request to a forwarding TCP connection and

means for determining whether the entire HTTP request has been received by parsing the header of said HTTP request to extract a field containing the
20 length of the HTTP request and using said extracted field to determine the length of said HTTP request.

32. The apparatus according to claim 31, wherein said first network device is a LAN switch.

33. The apparatus according to claim 31, wherein said second network device is a LAN switch.

34. A first network device capable of receiving HTTP requests and redirecting
5 them to a second network device, comprising:

means for receiving data contained in a HTTP request from a first TCP connection;

means for establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device;

10 means for writing the data in said HTTP request to a forwarding TCP connection and

means for determining whether the entire HTTP request has been received by comparing said data in said HTTP request to a predetermined data pattern as said data in said HTTP request is written to said forwarding TCP connection.

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35. The apparatus according to claim 34, wherein said first network device is a LAN switch.

36. The apparatus according to claim 34, wherein said second network device
20 is a LAN switch.

37. The apparatus according to claim 34, wherein said predetermined data pattern is a four byte octet sequence consisting of CR-LF-CR-LF.

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38. A cluster of network devices, comprising:

a cluster management station having a TCP interface for establishing a first TCP connection from said cluster management station to an HTTP server on a first network device and for sending an HTTP request containing network device
5 configuration data to the first network device through said first TCP connection;
and

a first network device having forwarding logic and a TCP interface for establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device, for reading said
10 data in said HTTP request from said first TCP connection, for writing the data in said HTTP request to said forwarding TCP connection, and for determining whether the entire HTTP request has been received by parsing the header of said HTTP request to extract a field containing the length of the HTTP request and using said extracted field to determine the length of said HTTP request.

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39. The cluster of network devices according to claim 38, wherein said first network device is a LAN switch.

40. The cluster of network devices according to claim 38, wherein said second
20 network device is a LAN switch.

41. A first network device capable of receiving HTTP requests and redirecting them to a second network device, comprising:

an input TCP interface for receiving data contained in a HTTP request from
25 a first TCP connection;

forwarding logic for establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device;

an output TCP interface for writing the data in said HTTP request to a forwarding TCP connection and

wherein said forwarding logic determines whether the entire HTTP request has been received by parsing the header of said HTTP request to extract a field containing the length of the HTTP request and using said extracted field to determine the length of said HTTP request.

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42. The network device according to claim 41, wherein said first network device is a LAN switch.

43. The network device according to claim 41, wherein said second network device is a LAN switch.

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44. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for redirecting network device configuration data, the method comprising:

establishing a first TCP connection from a management station to an HTTP server on a first network device;

establishing a forwarding TCP connection from the HTTP server on said first network device to an HTTP server on a second network device;

sending an HTTP request containing network device configuration data to the first network device through said first TCP connection;

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reading said data in said HTTP request from said first TCP connection;
writing the data in said HTTP request to said forwarding TCP connection;
and

determining whether the entire HTTP request has been received by
5 comparing said data in said HTTP request to a predetermined data pattern as said
data in said HTTP request is written to said forwarding TCP connection.

45. A program storage device readable by a machine, tangibly embodying a program
of instructions executable by the machine to perform a method for redirecting network
10 device configuration data, the method comprising:

establishing a first TCP connection from a management station to an HTTP
server on a first network device;

establishing a forwarding TCP connection from the HTTP server on said
first network device to an HTTP server on a second network device;

15 sending an HTTP request containing network device configuration data to
the first network device through said first TCP connection;

reading said data in said HTTP request from said first TCP connection;

writing the data in said HTTP request to said forwarding TCP connection;

and

20 determining whether the entire HTTP request has been received by parsing
the header of said HTTP request to extract a field containing the length of the
HTTP request and using said extracted field to determine the length of said HTTP
request.